

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a layer configured to manage the physical resource and to guarantee a quality of service, wherein access to the physical resource is divided into transmission time intervals;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of the transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data.

2. (Previously Presented) The system of claim 1, wherein the layer determines a plurality of sizes of the transmission units for the transmission time intervals the second and sub-layer selects one of the plurality of sizes according to the transmission conditions, the second sub-layer selecting a smaller one of the plurality of sizes when the transmission conditions on the physical resource are degraded.

3. (Currently Amended) The system of claim 1, wherein the layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size

adjusted to the second sub-layer.

4. (Previously Presented) The system of claim 3, wherein the layer reduces the size of each of the transmission units when the transmission conditions on the physical resource are degraded.

5. (Currently Amended) A The system of claim 1 for transmitting data over a physical resource, comprising:

a layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data,  
wherein

the layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

6. (Canceled)

7. (Previously Presented) The system of claim 1 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

8. (Previously Presented) A UMTS mobile telephony system using the system of claim 1.

9. (Previously Presented) The system of claim 2, wherein the layer supplies to the second sub-layer the plurality of sizes by means of a table.

10. (Previously Presented) The system of claim 4, wherein the layer adjusts the plurality of sizes of the transmission units by sending a table to the second sub-layer.

11. (Previously Presented) The system of claim 2 wherein  
the layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

12. (Currently Amended) A The system of claim 3 for transmitting data over a physical resource, comprising:

a layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein the layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer,

wherein

the layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

13. (Previously Presented) The system of claim 4 wherein

the layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a

transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

14. (Previously Presented) The system of claim 5, wherein the layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

15. (Previously Presented) The system of claim 11, wherein the layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

16. (Previously Presented) The system of claim 12, wherein the layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

17. (Previously Presented) The system of claim 13, wherein the layer allocates resources by lowering the set level of a service according to the inverse of a degree of priority of the service.

18. (Previously Presented) The system of claim 2 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

19. (Previously Presented) The system of claim 3 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

20. (Previously Presented) The system of claim 4 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

21. (Previously Presented) The system of claim 5 wherein the layer is configured to

retransmit the transmission units if acknowledgement is not received.

22. (Canceled)

23. (Previously Presented) The system of claim 11 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

24. (Previously Presented) The system of claim 12 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

25. (Previously Presented) The system of claim 13 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

26. (Previously Presented) The system of claim 14 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

27. (Previously Presented) The system of claim 15 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

28. (Previously Presented) The system of claim 16 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.

29. (Previously Presented) The system of claim 17 wherein the layer is configured to retransmit the transmission units if acknowledgement is not received.